

REMARKS

The Office Action dated May 6, 2005 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response to the Office Action.

Claims 17, 22, 26, 27-29, 31-33, 35, 36, 38 and 39 are amended to particularly point out and distinctly claim the subject matter of the invention. Claim 34 is cancelled without prejudice and new claim 40 is added. No new matter is added. Claims 17-33 and 35-40 are respectfully submitted for consideration.

The Office Action rejected claims 17-21, 24-29, 31-35 and 39 under 35 U.S.C. §103 (a) as being obvious over US Patent No. 5,479,481 to Koivunen (Koivunen), in view of US Patent No. 6,067,454 to Foti (Foti). The Office Action took the position that Koivunen disclosed all of the features recited in the above claims except the feature of inactivating all subscriber contexts which are stored in the second network element for use of the first network element, which are updated before the latest restart of the first network when the restart information of the message received in the receiving step differs from the restart information stored for the first network element. The Office Action asserted that Foti discloses this feature. The Applicant submits that the cited references taken individually or in combination fail to disclose or suggest all of the features recited in any of the pending claims. The rejection of claim 34 is moot in light of the cancellation of this claim.

Claim 17, from which claims 18-25, 37 and 38 depend, recites a method for restoring a subscriber context in a mobile communication network which includes at least a Serving GPRS Support Node (SGSN) and a Gateway GPRS Support Node (GGSN). The GGSN stores a plurality of subscriber contexts related to the SGSN. The method includes storing restart information for the SGSN at the GGSN. The method also includes receiving a message at the GGSN from the SGSN. The restart information indicates whether the SGSN has been restarted and whether a subscriber context has been updated in the SGSN after the latest restart. The method also includes creating a response to the message at the GGSN. The response includes restart information indicating whether the GGSN has been restarted. The method also includes transmitting the response to the SGSN from the GGSN. The method also includes comparing the restart information of the message received in the receiving step with the restart information stored for the SGSN at the GGSN. The method also includes inactivating all subscriber contexts which are stored in the GGSN for use of the SGSN and have been updated before the latest restart of the SGSN when the restart information of the message received in the receiving step differs from the restart information stored for the SGSN.

Claim 26, from which claims 27-29 depend, recites a system for restoring a subscriber context in a network element of a mobile communication network which includes at least a SGSN and a GGSN. The GGSN stores a plurality of subscriber contexts related to the first network element. The system includes storing means for storing restart information for the SGSN at the GGSN. The system also includes

receiving means for receiving a message at the GGSN from the SGSN. The message includes restart information indicating whether the SGSN has been restarted and whether a subscriber context has been updated in the SGSN after the latest restart. The system also includes control means for continuing the use of a subscriber context updated after the latest restart and for inactivation of the plurality of subscriber contexts which are stored in the GGSN related to the SGSN and have been updated before the latest restart, in response to the restart information. The system also includes transmitting means for transmitting a restart information from the GGSN to the SGSN, including a restart counter for counting a restart number and adding means for adding said restart number to a subscriber context message.

Claim 31, from which claims 32, 33, 35 and 36 depend, recites a SGSN for a mobile communication network. The SGSN includes transmitting means for transmitting restart information from the SGSN to a GGSN. The restart information indicates whether the SGSN has been restarted and whether a subscriber context has been updated in the SGSN after the latest restart. The SGSN also includes receiving means for receiving restart information from the GGSN. The restart information indicates whether the GGSN has been restarted and whether a received subscriber context has been updated in the GGSN after the latest restart. The SGSN further includes control means for continuing use of the received subscriber context updated after the latest restart and for inactivating a plurality of subscriber contexts stored in the SGSN for use by the GGSN and having been updated before the latest restart in response to the restart information when the restart

information of the message received in the receiving step differs from the restart information stored for the GGSN.

Claim 39 recites a method for restoring a subscriber context in a mobile communication network that includes at least a SGSN and a GGSN, the SGSN storing a plurality of subscriber contexts for use of the GGSN, and the GGSN storing a plurality of subscriber contexts for use of the SGSN. The method includes storing, at the SGSN, restart information for the GGSN indicating whether the GGSN has been restarted. The method further includes receiving a message from the GGSN at the SGSN, wherein the message includes restart information. The method further includes comparing, at the SGSN, the restart information of the message with the restart information stored for the GGSN. The method further includes inactivating all subscriber contexts that are stored in the SGSN for use of the GGSN except those subscriber contexts for use of the GGSN that have been updated after the latest restart of the GGSN when the restart information of the message received in the receiving step differs from the restart information stored for the GGSN.

Applicants submit that the pending claims recite features that are neither disclosed nor suggested in any of the cited references.

Koivunen is directed to a method for updating subscriber data in a cellular radio system and a cellular radio system. Koivunen describes one-to-one updating of subscriber data when a subscriber tries to establish a radio connection, and the restart indication of home location register (HLR) indicated by the subscriber data does not

coincide with the actual restart number of the HLR. Thus, only a single subscriber data is updated.

Foti is directed to a method in which an MSC undergoing a restart procedure, flags each temporary subscriber record in the MSC that went through the restart procedure. Similarly, the HLR flags each subscriber profile in the HLR to which an update is desired in the MSC but failed to do so because of a restart procedure by the MSC. The MSC, when requiring use of a flagged temporary subscriber record, checks the HLR to determine whether the subscriber record is still valid and can be used, if the subscriber profile has not been flagged. If, however, the subscriber profile has been flagged (i.e., the HLR has tried to update the temporary subscriber record during he restart period of the MSC), the subscriber record is updated. Thus, similar to Koivunen, there is only one subscriber record that is updated when needed. No inactivation of all subscriber data in another register is performed when detecting a restart of the sending code. See Foti at column 5 lines 3-40.

Applicants submit that the cited references taken individually or in combination fail to disclose or suggest at least the feature of storing restart information for the SGSN at the GGSN, as recited in claim 17 and 26, storing at the SGSN restart information for GGSN as recited in claim 39, and transmitting means for transmitting restart information from the SGSN to a GGSN, as recited in claim 31. As stated above, the independent claims as amended to particularly point out and distinctly claim that the network elements are a Serving GPRS Support Node (SGSN) and a Gateway GPRS Support Node (GGSN).

These features are neither disclosed nor suggested in the above cited references. For example, Koivunen discloses that restart information is sent by the home location register (see column 2 lines 52-56 of Koivunen and Foti fails to even mention the above features).

Further, Applicants submit that the cited references, taken individually or in combination, fail to disclose or suggest at least the feature of inactivation of all subscriber context stored for use by the GGSN and having been updated before the latest restart, as recited in claims 17, 31 and 39.

In fact, Applicant submits that there is no description in any of the cited references regarding inactivation of all subscriber context stored for use by the other network element and having been updated before the latest restart. The Office Action admits that this feature is not disclosed in Koivunen. However, the Office Action alleges that Foti discloses this feature on column lines 5-55. As discussed above, this feature is not mentioned, disclosed or suggested in Foti.

Further, Applicants submit that the cited references taken individually or in combination fails to disclose or suggest at least the feature of creating, in response to the restart information received from the SGSN, a response message which indicates restart information of the GGSN, as recited in claim 17. Applicants further submit that this feature was not addressed in the Office Action. If this omission is an oversight on the part of the Patent Office, Applicants request a new Non-final Office Action that addresses all of the features of the pending claims.

Applicants submit that because claims 18-21, 24, 25, 27-29, and 32-35 depend from claims 1, 26 and 31 respectively these claims are allowable at least for the same reasons as claims 1, 26 and 31.

Based at least on the above, Applicant submits that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in claims 17-21, 24-29, 31-33, 35 and 39. Accordingly withdrawal of the rejection of claims 17-21, 24-29, 31-33, 35 and 39 under 35 U.S.C. §103(a) is respectfully requested.

The Office Action rejected claims 22, 23, 30, and 36-38 under 35 U.S.C. §103(a) as being obvious over Koivunen and Foti, and further in view of US Patent No. 6,104,929 to Josse. The Office Action took the position that Koivunen and Foti disclosed all of the features of these claims except the feature of a GPRS support node. Applicants submit that the cited references taken individually or in combination fail to disclose or suggest all of the features recited in the above claims.

Specifically, because these claims depend from claims 17, 26 and 31, Koivunen and Foti are deficient at least for the same reasons as stated above regarding claims 17, 26 and 31, and Josse fails to make up for these deficiencies.

Josse is directed to a data packet radio service with enhanced mobility management. Josse discloses providing the address of a SGSN to a GGSN in an SGSN Address Request message. The Office Action cites 21 lines 33-53. However, Josse ends with column 18. It appears that the correct citation of Josse is column 12 lines 35-55.

In either case, Applicants submit that Josse fails to disclose or suggest the feature of inactivation of all subscriber context stored for use by the GGSN and having been updated before the latest restart, as recited in claims 17, 31 and 39. Thus, Josse fails to make up for the deficiencies of Koivunen and Foti.

Regarding claim 30, Applicants submit that Josse fails to provide the feature of transmitting restart information from the GGSN to the SGSN as recited in claim 26, and thus fails to make up for the deficiencies of Koivunen and Foti as discussed above.

Based at least on the above, Applicants submit that the cited references taken individually or in combination fail to disclose or suggest all of the features recited in claims 22, 23, 30, and 36-38. Accordingly, withdrawal of the rejection of these claims under 35 U.S.C. §103(a) is respectfully requested.

Applicants respectfully submit that new claim 40 recites features that are neither disclosed nor suggested in the cited references at least for the reasons discussed above. Thus, Applicants submit that claim 40 is in condition for allowance.

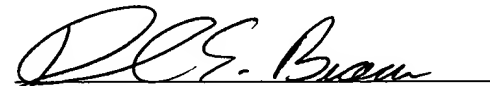
Applicants submit that each of claims 1-33 and 35-40 recite features that are neither disclosed or suggested in any of the cited references. Accordingly, Applicants request that each of claims 1-33 and 35-40 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by

telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


David E. Brown
Registration No. 51,091

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

DEB/cvl

Enclosure: Additional Claim Fee Transmittal
Petition for Extension of Time
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